

APPENDIX B. REASSESSMENT NOTES FOR THE BIG RACCOON CREEK WATERSHED TMDL

HUC-12	2010 AUID	2012 AUID	STREAM NAME	Date	Site	E. coli MPN	E. coli Geomean	Concentration		NOTES	E. coli	TP	TSS
								TP	DO				
51201081201	INB08G1_T1034	INB08C1_01	Big Raccoon Creek	4/26/2010	WLV160-0063	2419.6	1777.94			E. coli results (1777.94) indicate impairment of mainstem. New Ross WWTP is located immediately upstream of the mainstem sampling site. Advance WWTP also located along mainstem further upstream. Open dump site located outside the town of Max and drains into the headwater of Big Raccoon. Land use is primarily rowcrop agriculture. Due to CFOs in the area land application is a possibility in surrounding fields. Fish communities collected in 2005 along the larger mainstem show no impairment although as you move upstream to the headwaters the fish community becomes significantly impaired (goes from IBI=44 to IBI=16). CFO in watershed (Paul R Smith Hog Farm) is no longer active. Due to homogenous landuse the impairment applies to entire watershed.	NS	FS	FS
				5/4/2010		1119.9							
				5/11/2010		2419.6							
				5/17/2010		1119.9							
				5/25/2010		2419.6							
				8/8/2005	WLV160-0019								
				8/8/2005	WLV160-0018								
				8/8/2005	WLV160-0043								
				8/8/2005	WLV160-0016								
	INB08G1_T1001	INB08C1_T1001	Unnamed Trib to Big Raccoon Creek							Town of Advance drains into tributary. No point sources on tributary although landuse is primarily rowcrop agriculture and the presence of CFOs in the vicinity makes land application likely. No riparian. Same impairment applies to stream segment due to homogenous landuse.	NS	FS	FS
	INB08G1_01A	INB08C1_T1002	Dickey Ditch							No point sources on tributary although landuse is primarily rowcrop agriculture and the presence of CFOs in the vicinity makes land application likely. No riparian. Same impairment applies to stream segment due to homogenous landuse.	NS	FS	FS
		INB08C1_T1003	Cook Ditch							Landuse is primarily rowcrop agriculture and land application is likely due to CFOs in the area. No riparian. Same impairment applies to stream segment due to homogenous landuse.	NS	FS	FS
		INB08C1_T1004	Wells Ditch	8/8/2005	WLV160-0017			0.68	3.5	Fish community collected in 2005 indicate impairment (IBI=12 very poor). Stream segment should be impaired for IBC as well as E. coli due to the presence of rowcrop agriculture and lack of riparian buffers. Some residential homes near stream with possible septic issues. Several large farms of some sort in the area. Dissolved oxygen <4.0 and would be an impairment if sampled 3 times. Low DO and high TP indicate a nutrient impairment, however there were not 3 rounds of sampling conducted in 2005.	NS	NS	FS
51201081202	INB08G2_T1035	INB08C2_02	Big Raccoon Creek	4/26/2010	WLV160-0045	2419.6	2136.8			E. coli impairment continues downstream from site WLV160-0063. Currently 303d listed with an E. coli impairment. Stream reach will remain impaired. Fish communities sampled at 3 sites along the mainstem and no biological impairments exist. Impairment on mainstem increases in a ds direction due to sources contributed from tribs. Assessment applies to entire watershed. Some CFOs in watershed but no longer active.	NS	FS	FS
				5/4/2010		2419.6							
				5/11/2010		2419.6							
				5/17/2010		1299.7							
				5/25/2010		2419.6							
				8/8/2005	WLV160-0041								

51201081203				8/10/2005	WLV160-0020									
				8/10/2005	WLV160-0045									
		INB08C2_T1011	Unnamed Trib to Big Raccoon Creek							Landuse is primarily rowcrop agriculture. Narrow or no riparian buffer along stream. These non-point sources make a likely case that this tributary is impaired and contributing to downstream impairment on mainstem.	NS	FS	FS	
		INB08C2_T1012	Unnamed Trib to Big Raccoon Creek							The town on New Ross is located within the drainage basin of this tributary. Landuse upstream and downstream of New Ross is rowcrop agriculture. Tributary contributes to E. coli impairment downstream on the mainstem.	NS	FS	FS	
		INB08C2_T1013	Unnamed Trib to Big Raccoon Creek							Landuse is primarily rowcrop agriculture and land application is likely due to CFOs in the area. Riparian is narrow with some larger forested patches. Due to the similar landuse practices in the area this tributary likely contributes to the E. coli impairment downstream.	NS	FS	FS	
		INB08G4_00	INB08C3_01	Haw Creek	4/26/2010	WLV160-0027	2419.6	2104.12		E. coli results (2104.12) indicate severe impairment along mainstem of Haw Creek. Three sites sampled on Haw Creek for fish community in 2005 and no impairments were found. While there were no chemical violations in 2005 there was high total phosphorus, high total nitrogen, high TSS and low DO. The site WLV160-0030 is located downstream of the confluence with Lick Creek and there are lower levels of nitrogen, likely due to the dilution from Lick Creek. Landuse is completely rowcrop agriculture in drainage basin. Septic not likely causing impairment due to just a handful of homes. Impairment applies to all tributaries to Haw Creek due to homogenous landuse.	NS	FS	FS	
		5/4/2010	2419.6											
		5/11/2010	2419.6											
		5/17/2010	2419.6											
		5/25/2010	1203.3											
			8/10/2005	WLV160-0026			0.18	7.6						
			8/10/2005	WLV160-0027			0.35	5.5						
			8/9/2005	WLV160-0030			-1	10.7						
		INB08G4_00	INB08C3_02	Lick Creek	4/26/2010	WLV160-0064	2419.6	1187.68		E. coli results (1187.68) indicate severe impairment. Three fish community samples taken in 2005 and no biological impairments were found. Nitrate+Nitrite levels were high at site WLV160-0028 although no standards were violated. Forested riparian buffers are present throughout mainstem. The town of Roachdale is nearby and partially included in the drainage basin, development of this area could be contributing runoff. Roachdale WWTP located nearby but flows south into Cline Creek. Primary landuse is agricultural rowcrop.	NS	FS	FS	
		5/4/2010	980.4											
	5/11/2010	1553.1												
	5/17/2010	1046.2												
	5/25/2010	613.1												
		8/9/2005	WLV160-0028											
		8/9/2005	WLV160-0042											
		8/9/2005	WLV160-0029											
	INB08C3_T1001	Unnamed Trib to Haw Creek							Similar landuse to mainstem. Primarily rowcrop agriculture.	NS	FS	FS		
	INB08C3_T1002	Unnamed Trib to Haw Creek							Rowcrop agriculture with narrow riparian buffers. Landuse similar and the agricultural sources are likely to contribute to the E. coli impairment on Haw Creek.	NS	FS	FS		
	INB08C3_T1003	Unnamed Trib to Haw Creek							Similar landuse to other tributaries (rowcrop ag). Narrow riparian buffers. Segment will be impaired for E. coli based on information and landuse practices.	NS	FS	FS		
	INB08C3	Unnamed							Landuse primarily rowcrop agriculture. E. coli levels likely	NS	FS	FS		

		_T1004	Trib to Haw Creek							contributing to mainstem impairment.			
		INB08C3_T1005	Unnamed Trib to Lick Creek							Primarily used for agriculture.	NS	FS	FS
51201081204	INB08G5_01			4/26/2010	WLV160-0035	686.7	543.13			E. coli results show an increasing impairment in a downstream direction. The upstream results (543.13) are moderately impaired and the downstream results (2214.29) show a severe impairment. Landuse is primarily rowcrop agriculture. Narrow to no buffers surrounding stream. Currently 303d listed with an IBC impairment. Both WLV160-0034 and WLV160-0035 have IBC impairments, the sites further downstream do not have IBC impairments. DO violations at the time of sampling in 2005. The DO violation is in the headwaters and gradually increases in a ds direction. DO violations occurred in August during low flow conditions.	NS	FS	FS
				5/4/2010		307.6							
				5/11/2010		686.7							
				5/17/2010		1553.1							
				5/25/2010		209.8							
	INB08C4_01	Cornstalk Creek		4/26/2010	WLV160-0038	2419.6	2214.29						
				5/4/2010		2419.6							
				5/11/2010		1553.1							
				5/17/2010		2419.6							
				5/25/2010		2419.6							
	INB08G5_02			8/9/2005	WLV160-0034			0.15	2.1				
				8/9/2005	WLV160-0035			0.1	3.5				
				8/9/2005	WLV160-0036			0.09	4.3				
				8/9/2005	WLV160-0037			0.06	6.5				
				8/10/2005	WLV160-0038			0.1	6.58				
		INB08C4_T1001	Unnamed Trib to Cornstalk Creek							Wetland along one of the branches to the tributary but still primarily rowcrop agriculture landuse. Narrow riparian buffers along tributary. Stream segment should be impaired for E. coli.	NS	FS	FS
		INB08C4_T1002	Unnamed Trib to Cornstalk Creek							Small stand of trees surrounding tributary headwater but remainder of stream reach primarily rowcrop agriculture. Stream segment should be impaired for E. coli.	NS	FS	FS
		INB08C4_T1003	Unnamed Trib to Cornstalk Creek							Narrow riparian buffer however due to homogenous agricultural practices the impairment applies to this tributary.	NS	FS	FS
		INB08C4_T1004	Unnamed Trib to Cornstalk Creek							E. coli impairment based on rowcrop agriculture landuse. No riparian buffer for majority of stream. Small forested riparian just before confluence with Cornstalk Creek.	NS	FS	FS
51201081205	INB08G8_T1041	INB08C5_01	North Ramp Creek							Stream reach currently listed on the 303d list for IBC. Not certain why its impaired because there is no historical biological data for stream reach. Stream reach will remain impaired. Landuse is primarily agriculture. E. coli impairment likely due to moderate impairment downstream on mainstem.	NS	FS	FS
		INB08C5_T1001	Unnamed Trib to North							The town of Carpentersville is in this drainage basin and could contribute if there are septic issues. Similar agricultural landuse.	NS	FS	FS

		Ramp Creek										
	INB08C5_T1002	Unnamed Trib to North Ramp Creek							Similar agricultural landuse.	NS	FS	FS
	INB08C5_T1003	Unnamed Trib to North Ramp Creek							Similar agricultural landuse.	NS	FS	FS
	INB08C5_T1004	Unnamed Trib to North Ramp Creek							Similar agricultural landuse with some forested riparian buffer.	NS	FS	FS
	INB08C5_T1005	Unnamed Trib to North Ramp Creek							Upper reaches of stream segment agricultural landuse but farther downstream there is a forested riparian buffers and wetlands. Slight bacteriological contribution.	NS	FS	FS
	INB08C5_T1006	Unnamed Trib to North Ramp Creek							Landuse is primarily agriculture with narrow to no riparian buffer.	NS	FS	FS
	INB08C5_T1007	Unnamed Trib to North Ramp Creek							Primarily agricultural land with a narrow faorested riparian buffer. Contribution of E.coli towards downstream impairment likely.	NS	FS	FS
INB08G9_T1042	INB08C5_T1008	South Ramp Creek							Stream reach currently listed on the 303d list for IBC. Stream reach will remain impaired. Landuse is primarily agriculture and due to the downstream E. coli impairment on Ramp Creek this tributary likely contributes.	NS	FS	FS
INB08G9_01	INB08C5_02	Ramp Creek	04/26/10	WLV160-0015	2419.6	819.58			Fish community sampled in 2004 at upstream site and results indicated no impairment. <i>E. coli</i> impairment is moderate at the upstream site and increases to severe at the downstream site. Landuse is primarily agricultural with some forested patches along the corridor.	NS	FS	FS
			05/04/10		191.8							
			05/11/10		1732.9							
			05/17/10		1119.9							
			05/25/10		410.6							
			04/26/10	WLV160-0068	1732.9	1062.79						
			05/04/10		325.5							
			05/11/10		2419.6							
			05/17/10		2419.6							
			05/25/10		410.6							
INB08G9_T1001	INB08C5_T1009	Peters Creek							Good forested buffer along entire stream reach. No data collected on stream to support impairment. Other tributaries that flow into Ramp Creek likely contribute to the E. coli impairment.	NS	FS	FS
	INB08C5	Unnamed							Homogeneous landuse indicate similar bacteria levels.	NS	FS	FS

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51201081207			5/18/2004		188.1				sites since impairment is decreasing in ds direction.			
			5/25/2004		1046.2							
	INB08G6_T1002	INB08C6_T1003	Unnamed Trib of Big Raccoon Creek	4/26/2010	WLV160-0067	2419.6	1955.49		Currently listed on the 303d list for IBC impairment. Stream segment will remain impaired. Fish community was sampled in 2005 at two sites on the tributary. The farthest upstream resulted in impairment (IBI=32) but the site downstream had recovered and there was no impairment. There is an open dump site located next to the site with an IBC impairment. E. coli results (1955.49) indicate severe impairment. Landuse is primarily agriculture with some forested riparian along stream downstream towards the confluence with Big Raccoon Creek. TSS results also showed impairment (74).	NS	NS	NS
				5/4/2010		1299.7						
				5/11/2010		2419.6						
				5/17/2010		1553.1						
				5/25/2010		2419.6						
				8/10/2005	WLV160-0039			0.33				
			8/10/2005	WLV160-0040				0.21	5			
		INB08C6_T1004	Unnamed Trib to Big Raccoon Creek						Due to similar landuse (rowcrop agriculture) this stream segment likely is impaired for E. coli.	NS	FS	FS
		INB08C6_T1005	Unnamed Trib to Big Raccoon Creek						Due to similar landuse (rowcrop agriculture) this stream segment likely is impaired for E. coli. The town on Parkersburg is also in drainage basin and may have septic issues. However there is forested riparian surrounding the majority of the tributary which may reduce E. coli loads.	NS	FS	FS
		INB08C6_T1006	Unnamed Trib to Big Raccoon Creek						Forested riparian buffer with some wetlands surrounding tributary. Due to high impairments throughout watershed contributions likely from tributaries. Upstream impairments along mainstem are slowly decreasing in downstream direction however severe impairment still exists along mainstem. Cannot definitively state that this stream is not impaired. Due to magnitude of mainstem all tributaries likely contribute.	NS	FS	FS
		INB08C6_T1007	Unnamed Trib to Big Raccoon Creek						Wide forested riparian buffering stream but the steep gradient would support bacteria impairments during wet weather events due to the runoff it causes. Several wetlands surrounding stream. Agriculture in the headwaters and just before confluence with Big Raccoon. Impaired due to impairment downstream on Big Raccoon Creek. This tributary contributes to elevated E. coli concentrations on the mainstem.	NS	FS	FS
	INB08GA_00 INB08GA_T1043	INB08C7_01	Big Raccoon Creek	04/26/10	WLV160-0070	1553.1	1235.28		Although no data was collected in 2005 the upstream impairments will likely result in a portion of the mainstem segment to remain impaired for E. coli. There is still heavy agriculture in the upper reaches which would likely contribute bacteria to the mainstem. The watershed becomes more forested in the downstream direction so the E. coli levels would likely steadily decrease in the downstream direction closer to Cecil Harden Lake.	NS	FS	FS
				05/04/10		1203.3						
				05/11/10		2419.6						
				05/17/10		980.4						
				05/25/10		648.8						
		INB08C7_T1001	Unnamed Trib to Big Raccoon Creek						Landuse is heavy agriculture but there is a good forested riparian buffer. Stream reaches a likely still impaired based on other tributaries with similar landuse practices.	NS	FS	FS
		INB08C7_T1002	Unnamed Trib to Big Raccoon Creek						Landuse is heavy agriculture but there is a good forested riparian buffer. Stream reaches a likely still impaired based on other tributaries with similar landuse practices. All tribs to this reach of Raccoon Creek have forested buffers but are heavily rowcropped in headwaters.	NS	FS	FS

	INB08C7_T1003	Unnamed Trib to Big Raccoon Creek							Primarily agriculture in the headwaters but wide forested riparian buffer as you move downstream. Due to surrounding agricultural landuses and the high gradient in this part of the watershed impairments are likely during wet weather, suggesting impairment similar to the rest of the watershed.	NS	FS	FS
	INB08C7_T1004	Unnamed Trib to Big Raccoon Creek							Wide forested riparian buffer with a mix of some agriculture. The high gradient in this area of the watershed would contribute to high runoff during rain events suggesting bacteria impairments during wet weather.	NS	FS	FS
	INB08C7_T1005	Unnamed Trib to Big Raccoon Creek							Wide forested riparian buffer along entire stream reach. The high gradient in this area of the watershed would contribute to high runoff during rain events suggesting bacteria impairments during wet weather.	NS	FS	FS
	INB08C7_T1006	Unnamed Trib to Big Raccoon Creek							Fish community data collected in 1999 indicate there is no biological impairment. Wide forested riparian buffer, but due to gradient in this part of the watershed fast runoff during rain events would suggest impairments during wet weather.	NS	FS	FS
	INB08C7_02	Byrd Branch							Primarily agricultural landuse in the headwaters with some forested patches of land. While there is no data supporting E. coli impairment, based on results from similar tributaries in the watershed this stream segment is likely impaired.	NS	FS	FS
	INB08C7_T1007	Unnamed Trib to Byrd Branch							No data to support impairment but landuse is primarily agriculture and based on similar tributaries in the basin the stream is likely impaired for E. coli. Some forested land but primarily agriculture.	NS	FS	FS
	INB08C7_T1008	Unnamed Trib to Byrd Branch							No data to support impairment but landuse is primarily agriculture and based on similar tributaries in the basin the stream is likely impaired for E. coli.	NS	FS	FS